

New evidence on the original description of *Coryne fucicola* (De Filippi, 1864) (Cnidaria: Hydrozoa)

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ABSTRACT: After it was originally described in 1864, *Halibothrys fucicola* De Filippi (gen. et sp. nov.) was recorded in the field only once during the 19th century, in 1888. It was apparently then not seen in nature again until its “rediscovery” in 2005. The generic name *Halibothrys* is now considered to be a junior synonym of *Coryne* Gaertner, 1774, and recent authors accept *Coryne fucicola* as a valid species, but have unanimously cited 1866 as the date of its original description. In the present paper it is demonstrated that descriptions of the genus *Halibothrys* and of its sole species *H. fucicola* were published four times by De Filippi, the first as early as 1864, and again in 1865, 1866 and 1869. Two different spellings of the generic name appeared in these four publications, and they, with further incorrect subsequent spellings of the original name by later authors, include *Halybothrys*, *Halybotrys* and *Halobotrys*. The valid name of the species is thus now *Coryne fucicola* (De Filippi, 1864).

KEYWORDS: *Coryne fucicola*, Corynidae, Filippo De Filippi, *Halibothrys*, Hydrozoa, incorrect dates, incorrect spellings, multiple publication.

INTRODUCTION

The original descriptions of the genus *Halibothrys* and its type-species *H. fucicola* were presented by Professor Filippo De Filippi (1814–1867) to the Reale Accademia delle Scienze di Torino on June 12, 1864. The generic name soon came to be regarded as a junior synonym of *Coryne* Gaertner, 1774 (see Hincks, 1869: 318, using the spelling *Halybotrys*).¹ Some years later, Carus (1885: 2) listed, among taxa of the family Corynidae Johnston, 1837² in the Mediterranean Sea, two species of *Coryne*, adding *Halobotrys* [sic] *fucicola*, noting that “Corynis adnumeranda est” [to be attributed to *Coryne*]. Du Plessis (1888: 533) then synonymized *Halobotrys* [sic] *fucicola* with *Coryne vermicularis* Hincks, 1866, with which Leloup (1934: 1) later concurred. *Halybotrys* [sic] *fucicola* was regarded by Bedot (1910: 275) as an “espèce douteuse”, which he nevertheless assigned (as *Halybothrys* [sic] *fucicola*) to *Coryne* (Bedot, 1910: 460). Recent authors have adopted the binomen *Coryne fucicola* as the accepted valid name of the species (Schuchert, 2022a).

Since De Filippi’s first description, based on individuals grown in two marine aquaria at the Zoological Museum of Turin University, only Du Plessis (1888: 534) had found what he regarded as *Coryne fucicola* in the 19th century, in two French locations on the Mediterranean coast: Villefranche-sur-mer and Balaguier. Furthermore, he synonymized *C. fucicola* with

¹ Hincks’s two-volume monograph, *A History of the British Hydroid Zoophytes*, though dated 1868 on the title-pages, was published in 1869 (Williams, 2018a).

² Johnston’s “A catalogue of the zoophytes of Berwickshire” (Johnston, 1837), was previously thought by most authors to have been published in 1836, but it was in fact published in 1837 (Williams, 2018b).

C. vermicularis, which he recorded from Roscoff, France, in the English Channel, thereby apparently extending the geographical distribution of *C. fucicola* to the North-east Atlantic Ocean. In his review of the family Corynidae, Schuchert (2001) considered *C. fucicola* to be a “problematic or indeterminable species”, whilst he synonymized *C. vermicularis* with *C. pusilla* Gaertner, 1774, following Broch (1916), whose opinion remained uncontested by later authors. However, a few years later, Schuchert (2005) “rediscovered” *C. fucicola* near Roscoff. Considering at that time *C. fucicola* and *C. vermicularis* to be separate species, he provided a revised description of *C. fucicola*, and a comprehensive reassessment of the status of *C. vermicularis* Hincks, 1866, then advising against the synonymization of *C. vermicularis* with either *C. fucicola* or *C. pusilla*; his results of DNA analysis of 16S gene sequences showed that *C. fucicola* is not just a form of *C. pusilla*. Previously, *C. vermicularis* had been accepted by most authors to be a probable synonym of *C. fucicola*, but it is now generally regarded as a junior synonym of *Coryne pusilla* Gaertner, 1774 (see Schuchert, 2022b). It is impossible at present to judge whether it was actually *C. fucicola* or *C. pusilla* that Du Plessis (1888) found at Roscoff.

Herein, we present new bibliographic data on the multiple publications of De Filippi’s work on *Halibothrys fucicola*, establishing the paper in which the first description was published, and its correct date of publication. Surprisingly, the description of the genus and its type-species occurs in four publications, which include two different spellings of the generic name and two different descriptive texts.

CORRECT PUBLICATION DATE

The majority of publications by other authors after De Filippi’s original description of his new genus and species cite an earliest publication date of 1866. However, De Filippi’s aforementioned multiple publications appeared in 1864, 1865, 1866 and 1869, the bibliographic details of which are:

1. De Filippi, F., 1864. [Memoria sul genere *Eleutheria* e su di un nuovo genere di polipi idroidi del Mediterraneo]. P. 2 in: Sobrero, A., R. Accademia delle Scienze di Torino – Classe di scienze fisiche e matematiche. Adunanza del 12 giugno 1864. *Gazzetta Ufficiale del Regno d’Italia*, n°. 147 (22 June). [*Halibothrys fucicola* gen. et sp. nov.]
2. De Filippi, F., 1865. Sopra due idrozoi del Mediterraneo. Estratto da: *Memorie della Reale Accademia delle Scienze di Torino*, Serie 2, Tomo XXIII. Stamperia Reale, Torino. 13 pp. [*Halybotrys fucicola* gen. et sp. nov.]
3. De Filippi, F., 1866. Sopra due idrozoi del Mediterraneo. *Memorie della Reale Accademia delle Scienze di Torino*, Serie 2, Tomo XXIII: 375–385. [*Halybotrys fucicola* gen. et sp. nov.]
4. De Filippi, F., 1869. [Memoria sul genere *Eleutheria* e su di un nuovo genere di polipi idroidi del Mediterraneo]. Pp. 56–60 in: Sobrero, A., *Notizia storica dei lavori fatti dalla classe di Scienze Fisiche e Matematiche della Reale Accademia delle Scienze di Torino negli anni 1864 e 1865*. Stamperia Reale, Torino. [*Halibothrys fucicola* gen. et sp. nov.]

The 1864 (see Figures 1 and 2) and 1869 publications (De Filippi, 1864, 1869) are identical in wording, but not in layout, being the summary (without any formal title) written by the secretary to the Reale Accademia delle Scienze di Torino, Ascanio Sobrero, of the text presented by De Filippi to the Academy. The true author of the new names introduced is, nevertheless, De Filippi, according to the ruling of the I.C.Z.N. (1999, Art. 50.2). The texts published with a formal title in 1865 and 1866 (De Filippi, 1865, 1866) are absolutely identical to each other, both in wording and layout, and are clearly printed from the same typesetting



Figure 1. De Filippi (1864): bibliographical details at head of title-page of the *Gazzetta Ufficiale del Regno d'Italia*, n°. 147, 22 June 1864, in which *Halibothrys fucicola* De Filippi was first described (downloaded from www.gazzettaufficiale.it).

In seguito il prof. De Filippi fa conoscere un nuovo genere di polipi Idroidi, sviluppatisi negli stessi acquari marini del Museo Torinese. Questo genere (*Halibothrys*) è così caratterizzato:

Polipale tuboloso, eretto, debole, filiforme, ramoso; poche complicate, con rami rari e distanti. Polipi divaricati, portati all'estremità libera dei rami; tentacoli capitati, numerosi, distanti, sparsi. Gonofori semplici, non medusiformi, frammentati ai tentacoli.

La specie finora unica (*H. fucicola*), si fa notare da fuchi e dalle convere, insinuando nei loro intrecci i suoi deboli rami.

L'endoderma de'tentacoli è formato da un solo ordine di cellule fialine, sotto forma di cilindri assai deprezati, con un nucleo centrale. La serie di questi nuclei segna l'asse de'tentacoli. Il parenchima, (endoderma) della parte nuda del polipo, ossia del capitolo, è un aggregato di cellule fialine, il cui strato-interno contiene molti granuli di pigmento. La cavità gastrica è tappezzata da ciglia vibranti. Fra l'endoderma e l'ectoderma del capitolo si vedono distintissime fibre muscolari longitudinali. Il canettario è tutto sparso di corpuscoli orticanti. Il prof. De Filippi trova una grande analogia fra questo cenosarcio ed il così detto endoderma del disco delle Eleuterie.

Da'rami tubolosi, ossia dal cenosarcio, spuntano nell'*Halibothrys* le gemme che danno origine in brevissimo tempo a nuovi polipi; dal capitolo, frammento ai tentacoli, spuntano invece i gonofori maschili e femminili; i quali sono affatto semplici, senza traccia di canali raggiati.

In questa medesima adunanza il socio cav. A. Sobrero continua la lettura della Notizia storica dei lavori accademici per l'anno 1862.

L'Accademico segretario aggiunto
 A. Sobrero.

SOPRA
DUE IDROZOI
 DEL MEDITERRANEO
 DEL PROFESSORE
F. DE FILIPPI

TORINO, Stamperia Reale
 1865.

Figure 2. De Filippi (1864): text of the first description of *Halibothrys fucicola* De Filippi in the second part (page 2, column 4, lines 3 and 10) of the paper published in *Gazzetta Ufficiale del Regno d'Italia* (downloaded from www.gazzettaufficiale.it).

Figure 3. De Filippi (1865): title-page confirming the date (see bottom line) of the preprint (estratto; separate copy) of the paper by De Filippi (1866) published in *Memorie della Reale Accademia delle Scienze di Torino* (Harvard University Library copy; public domain; digitized by Google; downloaded from HathiTrust Digital Library).

at the Stamperia Reale, Torino. They are far more detailed than Sobrero's summaries, and are accompanied by two plates (both bearing three rubrics, thus: "Filippi dis. [disegnavit = drew]; Torino Lit. [= the lithographic preparator] F.lli Doyen 1865; Meco lit. [= the lithographic printer]"). They represent the paper actually delivered to the Academy by Prof. De Filippi, and were obviously intended as the definitive publication. The preprint (De Filippi, 1865) is

paginated [1]–13, with its own title-leaf, pages [3]–13 being equivalent to pages 375–385 of De Filippi (1866), published in *Memorie della Reale Accademia delle Scienze di Torino*. Adding to the confusion, the preprint is explicitly dated 1865 on its title-page (see Figure 3), which is corroborated by its inclusion in an annual bibliography for 1865 by Leuckart (1866: 141). Clearly, however, the earliest, and correct, date of publication of *Halibothrys fucicola* gen. et sp. nov. is that of the summary in De Filippi (1864).

INCORRECT SUBSEQUENT SPELLINGS

Comparing the texts, the spelling of the new generic name in De Filippi (1864) (and also in De Filippi (1869)) is *Halibothrys*, which is therefore the original spelling as correctly conveyed by Ascanio Sobrero, but in De Filippi (1865, 1866) the proposed name is spelt *Halybotrys*. The original spelling is the correct latinization of the Greek word ἄλς [άλός, ó], indicating salt. Therefore, *Halybotrys* is an incorrect subsequent spelling (I.C.Z.N., 1999, Article 33.3); it was used by Hincks (1869: 318), who dated it 1865, so he must have seen a copy of De Filippi (1865). Other incorrect subsequent spellings are *Halobotrys*, erroneously employed by Carus (1885: 2) for a species that he apparently considered to be provisional, and by Du Plessis (1888: 533–534); and *Halybothrys*, synonymized with *Coryne* by Bedot (1910: 310, 454). Neave (1939), in his *Nomenclator Zoologicus*, listed the incorrect generic spellings: *Halobotrys* (p. 555), *Halybothrys* (p. 558) and *Halybotrys* (p. 558), dating all of them 1866, but he inexplicably omitted the correct spelling *Halibothrys*, apparently accepting instead *Halybotrys* De Filippi, 1866 as the original spelling and date.

CONCLUSIONS

The information regarding the original description of the genus and species in the World Hydrozoa Database (Schuchert, 2022a) requires amendment. The original spelling of the generic name and its date, given as “*Halybotrys fucicola* de Filippi, 1866”, are both incorrect, and should read “*Halibothrys fucicola* De Filippi, 1864”. Furthermore, the foregoing evidence establishes the valid form of citation for De Filippi’s new species as “*Coryne fucicola* (De Filippi, 1864)”.

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